

Iowa Power Fund Board - Due Diligence Committee (DDC)
Meeting Minutes
September 24, 2008

Iowa Department of Economic Development, Conference Room
Des Moines, IA

Call to Order

Roya Stanley, Chair, called the meeting to order at 1:09pm

Roll Call

Member	Present	Absent
Tom Barton	X	
Franklin Codel	X	
Ted Crosbie		X
Vern Gebhart		X
Patricia Higby	X	
Fred Hubbell	X	
William (Curt) Hunter	Conf. Call	
Roya Stanley	X	

Also in attendance from the OEI, Governor's office: Brian Crowe, Jennifer Wright, Mary Lewis (Recording Secretary) and Deborah Svec-Carstens (general counsel).

Approval of Agenda

Ms. Stanley asked for a motion to approve the agenda. Mr. Hubbell motioned to approve; Mr. Hunter seconded the motion. The motion passed unanimously.

Approval of Minutes

Ms. Stanley asked for a motion to accept the August 27th minutes. Mr. Barton motioned to approve; Mr. Hubbell seconded the motion. The motion passed unanimously.

Chair's Remarks

None

Full-Application Review

08-06-1136 Farms to Fuel, Amana Farms, Inc

The Farms to Fuel project will address concerns over rising energy prices and global climate change by producing alternative, renewable energy. By combining cattle manure with organic industrial waste products in an anaerobic digester, methane gas will be produced and used to fire an engine/generator set to generate base load electricity. The combustion of methane also creates environmental benefits since methane is believed to be a greenhouse gas at least twenty-one times more potent than carbon dioxide produced by combustion.

Further energy savings and emission reductions will come from a more complete utilization of the nutrients in manure and waste streams. Anaerobic digestion of these products produces a fertilizer that is more readily available to crops than in their raw form. This will significantly reduce the production and application of commercial fertilizers in crop production.

Q: Is there storage of the gas on-site? You say that you don't need back-up generation yet Iowa needs back-up generation for wind. Is that something you have; is there storage on site?

A: It's a base load plant. Wind needs back-up because it has capacity factor in the range of 25-30%, at least to get cost effective. To create back-up or storage for that, you greatly reduce that efficiency and increase the cost per kilowatt that you're selling but wind does have a roll. In my opinion, its best roll is to back-up fuel.

Q: I think you've missed my point. My point is, this could be a back-up source...

A: Indeed it could be....

Q: ...and do you have storage. You know, are you going to use it as you make it or are you going to have some storage on hand?

A: We're not going to have any electricity storage on hand.

Q: I mean gas storage.

A: We will have some gin-n-core storage facility, we've got a feed lot right next door, and for storage, but for harvest storage to gas, it can hold a few hours. It's not a high pressure storage vessel. It runs at about 5 inches of water so now, we don't have gas storage on site. We use as we generate.

Q: But that's something you could investigate?

A: It wouldn't be very cost effective. You lose a lot of benefit in compressing it for storage. Most of the storage methods that exist right now aren't very cost effective.

Q: So you've already started building this?

A: Yes. In fact it's in the initial stages of operation.

Q: So what will happen if the Power Fund decides not to fund? How will that change what you're already building?

A: We'll have some stranded investment in upsizing that we might have done. We won't build the educational aspect, we won't finish the area for that. We won't do some things because we'd have to divert some funds. We won't be paving the road that we really should pave. We'll be spending more money than we intended to spend because we built it differently than we would have had we not had this in mind. But there will be things that we won't do. We won't be offering an educational component; we won't offer a research component because our primary business, especially if we don't get assistance from the Power Fund, is to make sure it is economic and does do what we advertised it would do.

Q: So the size of the plant, the 80/20 will still be there?

A: Yes, the size and scale are there but the ability for another entity to utilize it, besides us, I don't think can happen.

Q: In reality, how are you going to handle the education? Have you thought through that and what sort of format that might be?

A: There's been a lot of emails at this point. We've asked University of Iowa, Iowa State, Kirkwood and DMACC and there kind of overwhelmed with the possibilities. They know they want to utilize the sight for education but they don't know yet what to work with first; energy efficiency, the recipe. As far as the space is concerned, we don't have the room or supplies ready but that's something that can happen later.

Q: What about tours for the general public, would you still be planning to do that with or without the money?

A: Probably not without because we still have to do a lot with the finishing. One of the key things we have to do, if we were offering tours, or have unauthorized visitors, we'd do different things for safety than we will if we don't.

Q: There's a paragraph about sharing the carbon credits. Is that through the Chicago Exchange or some other exchange or how do you expect to do that?

A: We are in the process of contacting, or being in contact, with 6 or 8 different carbon aggregators at this point. Most of them are very interested in purchasing them. We're kind of naïve at this business so we're approaching it very slowly in terms of contract terms, timeframes and that sort of thing. We've been offered \$6 a ton for a ten year agreement. Now, on a project I did in New Zealand, we sold credits at \$40 Euros a ton in Europe. We may never get to that level in the U.S. but I think that locking in at \$6 a ton for tens years is giving away a lot of value.

Q: Is that were you came up with the 15% over ten years of the \$918,000? Is that by using the \$6 a ton figure?

A: Yes, I think we were assuming a \$6-\$7 ton reading there. I think our substance here was, or that our assumptions here would be a share or basically, if it were \$10 a ton we would share essentially the same percentage as if it were \$7 a ton.

Q: My initial concern of discussion was the public benefit and it seems as though the educational component, while there, is still not well defined, I do like the success fee part of this proposal. I do think it needs more concreteness. What are the assumptions and how long and what price would the carbons be traded in? When could we count on being repaid? Those are the questions that I want the Power Fund Board to look into more in depth.

A: Those are good questions. It's a good thing to look at when we can lock into \$6 today for a year or two but I think the price is going to go up. I don't think it's prudent to lock into \$6 for ten years. We could base calculations on what we have in hand today but I think that's the lower end of what could happen. But that could create a floor of what you could expect. We're not saying it stops. I'm saying it stops when we start paying the grant.

Q: Help me with the replication issue. You've got a program that's based on 20% off the farm, 80% off some other source from waste, and the 20% is 2500 animals, cattle I guess, so when you say there's lots of other locations around the state, are there really....at the size you have, you have to have it that big to make it economical. Because if someone was to go 50-50 you would have to have 6000 cattle as well as be located next to an ethanol producer or a large, other producer of waste. Are there really that many of those combinations out there?

A: Ours is sized, in part, to make it economical but also in part to take advantage of the full expectation we have for the off farm waste we had available to us. It can be economic but at a lower percentage of off farm waste, yes. Are there enough cattle farms, hog farms, dairy farms in Iowa? John sat on the Iowa Cattleman's Association Board and I asked him, "How many cattle raising, cattle feeding operations are there this size in the State of Iowa?" He said 400....

Q: Yeah, but that's only half the question.

A: Yes, that's only half the question. I said, "How many industrial/Ag food processors are there" and when you start to look at Cargill's locations in Cedar Rapids and Eddyville and look at Quaker's, General Mills, Archer-Daniels-Midland, Swiss Valley Farms, Quad Cities and Cedar Rapids, and all of the dairy producers and pet food producers, and all those, you get enough of those, often near metropolitan areas, throw in the waste that comes off ethanol plants, any you're getting more and more of those. You can find streams to feed, I would say, 30 to 50 of these. Now, is every one of those 100 or more cattle feeders going to be an ideal location? No, because you need that manure to be on a concrete floor because you can't harvest it in dirt. Dirt doesn't go well through a digester. You need manure supplemented with industrial sub-strait. Throw in the hog confinement operations; you start to increase that percent. There are sufficient places and opportunities to replicate this.

Q: Aren't they required, when they have more than 2500, to have concrete floors?

A: Cattle?

Q: No, the hog confinements.

A: You're required to have a national permit for anything over 999 but no, you're not required to have concrete floors. You just have to have all of your run-off water contained.

Q: So, would it be economical for you to just build a digester just based on your own 2500 cattle?

A: And just use that cattle manure?

Q: Right.

A: Very marginal.

Q: So if you build it and its successful would it be a good model for somebody that's got 700-800 or 3000 hogs in a confinement facility? And they've also got a farm right around there that they're farming to be able to just do it for themselves?

A: I believe that it would be. Again, it's going to go back to how much electricity are they using on the farm vs. exporting because those are two different numbers. For a source that's truly base load, we now have regulation that promotes wind. Frankly, you'll find a lot of utilities that don't like to hook up distributor generation, particularly if it's not reliable, unless they have some sort of incentives.

Yes – Barton, Higby, Hubbell – would like to have more definition of the education component,

Hunter – wants to ensure that we have a success fee arrangement

Table –

No – Codel

Proposal goes forward to the Power Fund Board.

Review of Pre-application

08-08-1144(B) Energy Efficient Rebuild for Iowa (Green Streets), Iowa Department of Economic Development

Reviewed by Stanley

- The second part of pre-application that was not reviewed in August.
- Recognize lots of buildings that need help but this proposal could go towards Rebuild Iowa
- Power Fund has now invested money in Jumpstart and there's a need for better measurement controls.
- Power Fund should work with utilities to implement those energy efficient efforts. No one else is doing the full inspections.
- There's a rush to rebuild with no effort to take time to think/plan for energy efficiency. A lot of benefit to be had – if it can be done.
- In regards to the jumpstart program, we would have some control over the measures associated to those funds.

Discussion took part on moving pre-app to full app status. Mr. Hubbell made motion to move the application status to full, Mr. Hunter seconded the motion. Ms. Stanley asked for the vote.

Yay – Hubbell, Codel, Higby, Barton, Hunter

Nay –

Application status changed to full application.

Iowa Green Streets – The Iowa Department of Economic Development (DED) proposes to a comprehensive, long-term strategy to energy efficiency practices and green building practices for approximately 2,500 disaster damaged and destroyed buildings estimated to receive Community Development Block Grant (CDBG) funding administered by DED. By applying the comprehensive approach to energy efficiency and green building at this time, DED, the Iowa Power Fund and CDBG program participants will create Iowa's largest ever energy efficiency makeover in a matter of months. The end result will be thousands of better performing, more energy efficient model homes and public buildings that the Iowa Power Fund, DED, utilities, communities and residents can learn from.

- There will be \$85 million coming into Iowa in the next week or so in the form of Community Development Block Grants
- The criteria for distributing the dollars distributed by the DED would be green design.
- The idea of the program is to help fund design, and implementation of technology to promote energy efficiency.

Q: Can we require certain design criteria, certain levels of efficient equipment to be used in projects?

A: That was one of the ideas behind this whole proposal. About two months ago, in July, the department adopted our own Iowa green design criteria or Iowa Green Streets criteria. This is criteria that we had already planned on, this spring, requiring for all of our future affordable housing, community block grants, our community facility projects and our main street challenge grant projects. We were going to apply that to our noble round of funding this fall and it's in their application requirements. It's our intention to also apply this criteria to all those CDGB dollars (Community Development Block Grant) you hear about that are coming in as a supplemental appropriation to help with Rebuild Iowa. So in addition to Jumpstart money, there's roughly \$85 million coming in very soon, through the Community Development Block Grant program to help businesses and homes with recovery efforts. For example, \$40 million of that is going towards homes, \$5 million of that going for new home construction and \$35 million of that going for rehab, down payment assistance or mortgage assistance. So it's our intention to apply this criteria to those projects that we're funding with CDBG dollars. This appropriation is coming very soon and

what we would anticipate for future appropriations as part of the rebuild as well. Now, if there's an inconsistency, and your equipment requirements are more stringent than ours, we would be happy to adopt that. It would make sense for consistency between the two programs. It's our intention to require green design, green construction on the projects we're administering recovery dollars for through this department. We also know that it's one thing to require them to design it to be more energy efficient; it's another thing to get it built energy efficient which is where that training aspect came in and then the big piece, assistance from that certified third party energy rater to make sure, one, did they calculate the right size and type of unit to go in there for heating, cooling, duct systems, two, did they actually build the thermal envelope correctly - was it sealed up correctly, insulated right, did they use the right technologies, did the duct system get installed correctly, sealed correctly, right sizing and all that and did the HVAC system, was it 92% efficient furnace and was it installed correctly so they're actually getting the advantage of the 92% efficiency. If you install a 92% efficient furnace but it's only giving you 70% of it's output, you're defeating the purpose. That's why the third party rater would go in there, inspect this stuff, pre-drywall, and at the end, would test the HVAC system to verify the unit's performance and get us what we're after. Now, my understanding, in many cases with the energy rebates, they're based on buying and installing a certain piece of appliance. There's no verification that they're operating efficiently.

Q: Actually, you're under the assumption that they don't test?

A: Correct.

Q: You don't know that, for Alliant Energy, in order to get it, there has to be a HERS (Home Energy Rating System) rating before you can get your rebate.

A: There's a HERS rating but when they calculate the....

Q: But that includes a corridor test and I thought that included a draft test as well.

Q2: Are you talking about new construction?

Q: Yes.

Q2: But that's not the case for retro-fits.

A: Those two pieces are what we're including to the board but there are other...for example the National Comfort Institute has a testing protocol for actually testing the installed equipment to make sure that, with the equipment, you're getting at least 90% efficiency of the rated output coming out of the unit. I think it goes a step beyond what we typically see happening.

Q: I guess that what we don't really know here is how much, because that's a lot \$1,250,000, for energy verification.

A: That number is based on, and I can tell you all about that. Synergy is a third party rater that would do a complete set of testing and use HERS index as well as Rimmery calculations to determine if they qualify for Energy Star. The estimates we got on that was \$500 a unit per homes and \$350 a unit for apartments. I took the \$500 figure times an estimated 2,500 homes we'll be working with and that's how I arrived at the \$1.2 million dollar figure.

Q: You might be duplicating the same tests that the utilities are doing so that they can give a rebate?

Q2: Well, that's certainly something that could be dealt with.

A: Yeah, we could definitely find out.

Q: My other question is, do you have to test each one? I mean, the IRS doesn't audit everybody's tax return. Definitely out of each manufacturer/installer you're definitely going to want to be spot checking some of those things. Do you have to do every single one?

A: That's a very valid question. In our original criteria, we proposed to do just periodic type audit situation or doing a certain percent of units and the feedback that we got is, it's really hard to do that because you don't always have the same builder or the same subcontractor but you also don't always have the same floor plan, the same orientation, you don't have the same people installing the systems, there were enough variability that, for at least our criteria, we're requiring on each one. If it's something we need to take a look at, we're willing to do that but for now, and for our criteria, all of our other programs will require it for each project.

Q: One of the things you say you're going to do is ensure location efficiency is addressed. Is that correct?

A: We also have in our Green Streets criteria, we have a whole section that deals with locating where you're making use of existing infrastructure, locating within an existing city boundary, not locating within a flood plain, not locating in a wetland, not locating on prime farmland, it's a

walkable neighborhood, if there's transit available you have access to it. We actually have three criterion to deal with location efficiency. This is geared towards affordable housing and community facilities and main street projects and those things where, well, transportation and access to services are important to all of us but a bigger burden to the lower income residents of communities being served through this program traditionally every year, year in and year out.

Q: Do you see this as having a three-year life cycle or is it going to go beyond this funding request in some form?

A: What I see in the future, the rebuilding will probably be a good three-year process. This will have a life beyond three years. If anything, I see it becoming more stringent in the future partly depending on what comes out of the Iowa Sustainable Design Standards that the Department of Public Safety was directed to develop by the legislature last spring. We're participating in those discussions starting next week and I think that if those come out more stringent than this, we're very interested in going that direction; if not, we're going to continue with this. What we're getting from HUD is their increased interest in more sustainable design application to their funds as well.

Q: So what happens if your inspectors find out that a retrofit didn't follow your rules?

A: Well then, depending on what stage you're at, they'd either be looking at another retrofit or repair, if it's at that point, otherwise, we could be looking at either some type of loan repayment instead of a grant situation, a reduction of the funding award that was provided on that project' those are probably the three most likely options to us. This is our first year round of applications for us so thankfully we haven't had to address it yet but I know from Tim Waddell whose a division administrator here, and he, with the director, while they were at Iowa Finance Authority, they did some inspections on projects, they were requiring a certain level of efficiency for furnaces and air conditioners, had a couple projects that, upon inspection, did not put in the high level of efficiency that they were supposed to and they actually had to require them to take them out and put in the higher efficiency.

Q: So one way or another, the owner or renter or somebody whose going to use the property is going to have to pay more money to make it correct?

A: Whoever the recipient was, coming from us...

Q: Well, spend less money, have a less efficient place but they're going to spend more of their money to get whatever they have.

Q: You had your request for proposal out and it was due September 12th for the Iowa Sustainable Building Design and Construction Training. Were you pleased with your response to that?

A: No.

Q: I was going to say because when I and my colleague looked at it, for \$65,000 per year per multiple across the state trainings, it didn't seem doable to me and then when I talked to COSC, Center On Sustainable Communities, and Bill McNally they said they withdrew their application on this. You've only got \$250,000 for training and five times that for the verification. Do you think perhaps you don't have the right mix there?

A: I think you can make an argument going either direction. I think that, for good or for bad, that government, and it was my thought that the Power Fund would like more of an emphasis on the verification piece versus we'd train a lot of people on how to design and build green but we don't know whether they're actually building green or not. I decided to put the emphasis on the verification piece of it. And you're right, we didn't get any proposals to the green building training. COSC sent me a couple page outline on what they were thinking. Got a little cold feet on the last day. I talked to Lynnae Hentzen a couple of times this week and they were having some ownership concerns. They had built up a brand, towards establishing a network of training opportunities across the state and were afraid that perhaps this would be giving up ownership of that. Our response to them; we'd wished we had known that they had that concern and that they had told us that before the deadline and had actually applied. It is not our intent to be owners of the training. Our intent is to help facilitate the training by providing some funding and to get it going.

Q: When COSC does training, there's a test at the end, you pass the test, you get a letter and certificate saying you've completed the training. Is that the sort of thing you're going to require of contractors or builders to show verification that they know what they're doing? Do you have a requirement for any type of certification?

A: We don't have a requirement for any specific certification. We have requirement in the application right now for them to tell us whether they have experience with our design criteria and identify projects they've completed to date. We're interested in the possibility of requiring some type of certification or cu's and in the request for proposal we had issued, we had really encouraged that to be a piece of the proposal, some type of a professional building certification.

Q: Because, unless you require it, then it's less likely that they'll take the training as well.

A: In the future, another avenue for us to take would be to say "you have to go to the training to apply". What we're doing this time around, at least in a small dollar amount, we're providing scholarships for some people to attend the Centers Of Sustainable Communities residential building workshop in November.

Yes – Hubbell – that OEI have an opportunity to address energy efficiency issues with coordination with utilities and that kind of thing, make sure we have the right allocation between money that goes for training and money for certification and to get accountability in place.

Table – Codel – agrees with a lot of Mr. Hubbell's comments but would like to see it first
Barton, Hunter – just listed 12 or 13 loose ends that need to be tied down before feeling comfortable pushing forward.

No – Higby – just not convinced that DED is the best group to give money

Q. Is there Federal match involved? By tabling this project, does it jeopardize any of that money?

A. No, some of that is CDBG money and I'm sure most would be spent but I anticipate there will be more CDBG money for recovery efforts going forward.

Proposal is Tabled.

08-08-1146 Planergy Waterloo Digester CO2 Removal Effort, Planergy Waterloo LLC

Reviewed by Codel

- Project is for the collection of Co2 and excess gas during anaerobic digestion
- Wants to install a compressor for those times Tyson can't sell or doesn't want the by-product
- Would remove 8 million BTUs per year
- Can store 500 thousand which is about 15-30 days of production
- Bulk of the money is for the compressor and the storage process
- It wouldn't significantly help Iowa
- Nothing new with the technology
- Project appears to be an equipment buy

Yes –

Yes If –

No But –

No – Barton, Higby, Codel, Hunter, Hubbell

08-09-1152 Blue85, William Todorof

Reviewed by Codel

- Gearless wind turbine using magnets in the process
- This type of generator can handle different types of wind speed unlike current models
- Didn't have much information on his qualifications in his application
- There is some information that indicates that owner of the company is looking to get up to \$18 million to finance the company - unclear how the Power Fund dollars fit into the funding

Yes –

Yes If –

No But –

No – Hubbell, Hunter, Barton, Higby, Codel

08-09-1151 Brilliant Battery Development, Bill Todorof

Reviewed by Hubbell

- Increasing battery capacity in cars especially since there's a lithium shortage
- Document looks like it's for a venture capital firm
- Applicant believes that project can make \$30 million
- \$750 thousand is too much to ask for
- Not sure where the match money is coming from
- Would definitely need a technical review to prove applicant's theory

Yes –

Yes If –

No But –

No – Hubbell, Hunter, Higby, Barton, Codel

08-08-1145 Plug-In Electric Hybrid (PHEV), Consumers Energy Cooperative

Reviewed by Gebhart, Reported by Stanley

- Question raised, "Is Iowa that unique from what's already known in studies done of electric hybrid vehicles?"
- Reviewer thought it is needed because surveys previously done reflect one vehicle, not multiples or groups of multiples
- Concerned about the future of this technology
- Thought that if people could be convinced of the carbon reduction benefits, it would be a good project.

Yes – **Higby, Hunter, Hubbell**

Yes If –

No But –

No – *Barton*

08-09-1150 Evaluation of Hybrid-Electric Commercial Vehicles in Iowa, O'Halloran International, Inc.

Reviewed by Higby

- Project is a plug-in hybrid fleet
- Power Fund would be used to purchase the trucks, then after evaluation, the applicant would keep them
- Seems like a credible test but reviewer not happy with the price
- EPA already requires emissions to be evaluated.

Yes –

Yes If –

No But –

No – Barton, Higby, Hunter, Hubbell

08-08-1147 Energy Efficient Window, Pella Corporation

Reviewed by Higby

Reviewer stated that applicant had submitted confidential information and that the meeting would need to go to closed session. Ms. Higby made a motion that the meeting go to closed session. Mr. Hubbell seconded the motion. The vote was as follows:

Yay – Higby, Hubbell, Barton, Hunter

Nay –

Members of the public were asked to leave the room and informed that they would be let back into the meeting after the closed session had concluded.

Yes –

Yes If – *Higby* – if the applicant also talked with IDED

No But –

No – *Barton, Hunter, Hubbell*

08-08-1148 Corn Oil Bio-Solutions, Corn Oil Bio-Solutions, LLC

Reviewed by Crosbie, Reported by Stanley

- Might be a good idea but needs to understand the true value of the project
- No new technology introduced/developed
- Wasn't sure if the project would go very far if its turned down
- Most of the crude corn oil now had DDGs
- It's a fractionation project

Yes –

Yes If –

No But – *Barton, Hunter, Hubbell* – For this specific type of industry, if the OEI staff want to revisit – the app could come back to be reconsidered

No – *Higby*

08-09-1149 Biomass Heat & Power Cogeneration Grain Dryer, Paradigm Research Corp

Reviewed by Barton

Applicant proposes to buy boiler, steam engine and electric generator to dry grain

Nothing in project is innovative

No background in this kind of industry

Details about the project were sparse

Yes –

Yes If –

No But –

No – *Higby, Barton, Hubbell, Hunter*

Other Business

The subject of the amount of funds available in the Power Fund was discussed. Due to re-appropriated funds to the Rebuild Iowa Office and the project commitments that already exist, it was suggested that the October DDC meeting be canceled. OEI staff suggested that the DDC members leave the October meeting on their calendars. Staff thought the DDC would like to meet, if the volume of new pre-applications received was high but if not, the meeting could be pushed back to the combined November-December meeting on December 15, 2008. Ms. Stanley said that, after the combined meeting, the DDC could meet quarterly. OEI staff will assess applicant deadlines and inform the DDC if there will be an October meeting. Ms. Higby suggested OEI craft a press release about funding availability. OEI will work on drafting reports to inform the Power Fund Board and DDC of the total amount of project obligations.

Adjournment

4:04pm

Respectfully Submitted,

Mary Lewis, Recorder